CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.04/KRIDL/WMM/Gradation/2015-16

29.10.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvements of drain and asphalting to 22nd cross roads in Judicial layout in Ward No.04, BBMP, Bangalore.

Reference : BBMP/EE(YNK.D)/W.O/108/2014-15 Dated: 20.02.2015

Date of Testing : 29.10.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 7435

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	250	250	3.4	96.6	95-100
22.4	2285	2535	34.1	65.9	60-80
11.2	1205	3740	50.3	49.7	40-60
4.75	1000	4740	63.8	36.2	25-40
2.36	965	5705	76.7	23.3	15-30
0.600	925	6630	89.2	10.8	8-22
0.075	445	7075	95.2	4.8	0-8

Note:

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2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
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Bangalore-560079.

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Job No.: CTCE/BBMP/W.No.04/KRIDL/SDBC/Bitumen/2015-16 03.11.2015

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	Improvements of drain and asphalting to 22nd cross roads in Judicial layout in Ward No.04, BBMP, Bangalore.
REFERENCE	BBMP/EE(YNK.D)/W.O/108/2014-15 Dated: 20.02.2015
SAMPLE I/D	Roads in 22nd cross Judicial layout Ward No.04.
DATE OF TESTING	03.11.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474.5	475
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25.5	25.00
7. Bitumen content in %	5.10	5.00
8. Average	5.05	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	34.23	7.21	7.21	92.79	90-100
4.75	255.6	53.87	61.08	38.92	35-51
2.36	36.21	7.63	68.71	31.29	24-39
1.18	31.22	6.58	75.29	24.71	15-30
0.3	29.63	6.24	81.54	18.46	9-19
0.075	50.32	10.60	92.14	7.86	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	31.22	6.24	6.24	93.76	90-100
4.75	260.5	52.10	58.34	41.66	35-51
2.36	75.63	15.13	73.47	26.53	24-39
1.18	40.32	8.06	81.53	18.47	15-30
0.3	31.29	6.26	87.79	12.21	9-19
0.075	27.52	5.50	93.30	6.70	3-8

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Job No.: CTCE/BBMP/W.No.04/KRIDL/SDBC/Bitumen/2015-16 06.11.2015

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	Improvements of drain and asphalting to 22nd cross roads in Judicial layout in Ward No.04, BBMP, Bangalore.
REFERENCE	BBMP/EE(YNK.D)/W.O/108/2014-15 Dated: 20.02.2015
SAMPLE I/D	Roads in 22nd cross Judicial layout Ward No.04.
DATE OF TESTING	06.11.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475.5	474.5
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	24.5	25.50
7. Bitumen content in %	4.90	5.10
8. Average	5.00	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	32.26	6.78	6.78	93.22	90-100
4.75	256.3	53.90	60.69	39.31	35-51
2.36	35.22	7.41	68.09	31.91	24-39
1.18	31.28	6.58	74.67	25.33	15-30
0.3	36.69	7.72	82.39	17.61	9-19
0.075	56.32	11.84	94.23	5.77	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	36.25	7.25	7.25	92.75	90-100
4.75	265.4	53.08	60.33	39.67	35-51
2.36	72.32	14.46	74.79	25.21	24-39
1.18	39.22	7.84	82.64	17.36	15-30
0.3	30.22	6.04	88.68	11.32	9-19
0.075	26.35	5.27	93.95	6.05	3-8

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